



Sustainable degrowth through more amateur economy

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Conference proceedings

Sustainable degrowth through more amateur economy

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**2nd Conference
on Economic
Degrowth**
For Ecological Sustainability
and Social Equity

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Abstract

The purpose of this paper is to show by a simple, aggregate, descriptive model, how the role of labour input to the production sector has to be revised in a degrowth economy, aiming at a ecologically sustainable level, here defining economy as all human activities involved in converting natural resources into human satisfaction.

Some of this economy is categorized as professional economy, consisting of the activities driven by money and contributing to Gross Domestic Product, GDP. This is what is conventionally understood by the term economy.

Another part of economy, here termed amateur economy, is, however, driven by love and affection like activities in the home, among friends, in various kinds of organizations, etc. Such 'voluntary' activities play a large role in the economies of developing countries, while in industrialized countries much of the former amateur economy, as for instance child care, food preparation and gardening, have been absorbed in the formal, professional economy, and thereby contributing to growth in GDP.

Shifting an activity from amateur economy to professional economy usually has good sides as well as bade ones. For instance it will increase productivity, meaning goods or service output per hour worked. But when human satisfaction from the work is included, like when people are growing their own food, the balance is less obvious.

If for environmental reasons society wants to limit production, this shall immediately imply a reduction in labour input into the professional economy's production factor. This can take many forms, such as working fewer hours per year or lowering labour productivity. It appears difficult, but not impossible, to imagine choosing lower labour productivity in the professional economy. But if annual working hours are reduced through a work sharing policy in the professional economy, as seems to be desired by majorities in many nations, this should leave time for more activities in the amateur economy with its lower labour productivity, but higher satisfaction, for instance when joining local community activities, cooking your own meals, or caring for children and grandparents. This will tend to reduce GDP, but might well increase satisfaction of the total economy. Environmental impact of such a change is not simple to analyze. In some cases 'do it yourself' activities can be ecologically wasteful, in other cases the opposite, as shall be illustrated by examples.

Keywords

amateur economy; professional economy; labour input; work sharing

1 Introduction

When people in affluent countries become conscious about human pressure on the environment, a first focus is typically the necessity to reduce the wasteful consumption. This is what we are directly facing in everyday's life. Less obvious is the necessity to reduce our contribution to the production, through the work we as individuals perform in one way or another. This role appears as a small piece in a big puzzle, and it is hard to overlook the consequences of one's work. In an aggregated view, however, in a degrowth economy we do have to reduce both our consumption and production.

In practice the connection between work and consumption also implies that reducing consumption can be rewarded or compensated with more of something else, namely free time. The environmental consequences of our activities will usually become more clear when they take place in what is here termed an Amateur Economy, where you often follow the 'product' on a longer stretch from raw material to your own satisfaction, as when building your own carport or sewing your own dress.

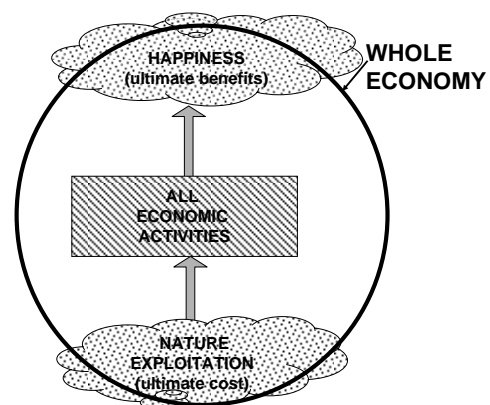
Section 2 in this paper defines and discusses the concept of a whole economy, and its low efficiency in today's affluent countries. **Section 3** is about the role works play in the economies and the necessity to change its role in a degrowth economy. **Section 4** defines the concept of Amateur Economy and its role as the fourth way to avoid unemployment in a degrowth economy. **Section 5** provides a small conclusion.

2 Whole Economy Chain

Originally economics as a discipline was not about money, as it is commonly perceived today. As the Greek origin of the word indicates, economy is about good housekeeping with resources. Only part of the activities in our daily behavior, - but a growing part - happens to be measured in money terms, and they are contributing to the concept called Gross Domestic Product, GDP, and gets all the attention. But today we see more and more indications that GDP gives a very narrow, defective and even misleading impression of progress in a society, as discussed below.

The term Whole Economy is here used to denote the orderly conversion of the ultimate cost, the ecological exploitation of nature, to the ultimate benefits, human satisfaction or happiness, see **Fig. 1**.

Fig. 1 The Whole Economy is much more than the money economy, since it includes all the steps in converting the ultimate cost to the ultimate benefits, human happiness



2.1 GDP and Alternatives

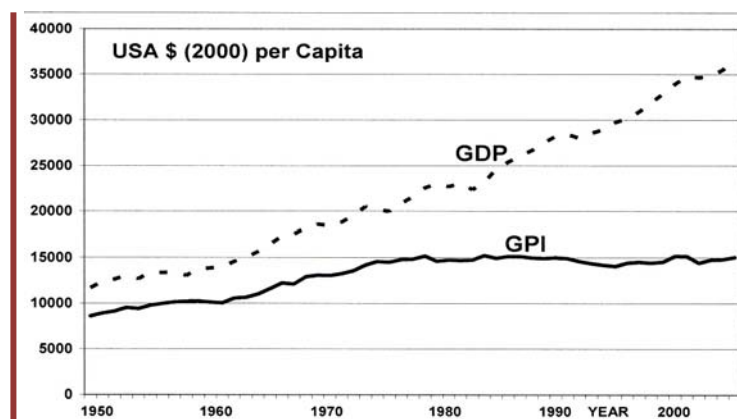
Gross Domestic Product, GDP, is today in practical economic policy used as a measure for how well a country is doing and progressing, although the inventor of this concept in the 1930s, Kuznets, warned against this interpretation. Essentially all economists still agree on GDP's severe shortcomings as a measure of progress, but they usually fail to warn about its use in politics.

One surprising shortcoming of the GDP is that all activities, whether they give a positive or negative contribution to the development, are added up. Indeed a strange account, which can explain why GDP-growing economies very well can reach a point of negative marginal benefit, a development, which the American economist Herman Daly has called uneconomic growth [Daly 2007]. There are good reasons to search for alternative indicators of progress and well-being, but no reasons to wait for them before stopping the use of GDP.

Various attempts have been made to come up with a better single indicator. The most moderate and 'gentle' are based on modifying GDP and weeding the most severe absurdities, reversing the sign of some contributions, etc., but still expressing the parameters in monetary units. An example is Genuine Progress Indicator, GPI [Talberth et al. 2006]. For USA the development of GPI is in **Fig. 2** compared to the GDP from 1950 till 2004, showing no genuine progress over recent 35 years.

Fig. 2 Development in Gross Domestic Product, GDP, and Genuine Progress Indicator, GPI, for the USA

Source: Talberth et al. 2007

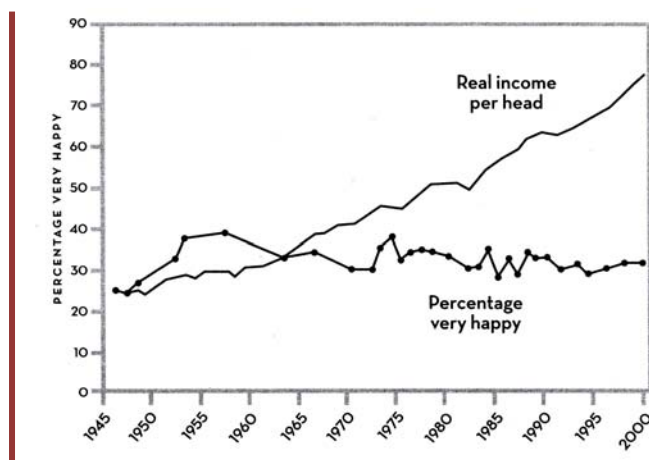


Let us take the improvements of indicators one step further in attempt to register the ultimate benefits like happiness or satisfaction. **Fig. 3** shows for the USA the development in the percentage of very happy since 1945, compared to an index for real income per capita, which is not very different from GDP per capita.

The observation from both these graphs is that at a certain level of GDP per capita the growth in benefits levels off, and afterwards neither GPI nor Happiness seems to improve. The same observation can be drawn from comparing these parameters in various countries [NEF 2009], just as other studies in affluent countries suggest no relation between well-being and consumption [Jackson 2005].

Fig. 3 Development in the USA real income per capita and the percentage very happy citizen

Source: Layard 2005



2.2 Whole Economy from Cost to Benefits

Fig. 1 is an attempt to illustrate a more Whole Economy, through which the exploitation of nature is converted into human happiness. Although these benefits for humans resemble what economy should basically aim for, today's economist seems to have forgotten happiness, moral, and other non-quantifiable aspects of the economy. Instead they have become engaged in quantifiable parameters to feed into their computer models. In recent couple of decades, however, a rather new discipline has developed around investigating and somehow quantifying 'happiness' or 'satisfaction'. This is obviously associated with large uncertainties. When, however, comparing nations or analyzing development over time, the trends are less uncertain.

The established GDP is quite exactly defined, but rather erroneous as a measure of well-being. The new attempt to register happiness as a measure of well-being seems in principle to be more correct, although with larger uncertainties.

Similarly, at the cost end, the bottom of Figure 1, the measurement and quantification of the sacrifices from exploitation of nature is difficult and soft. We can as an overall environmental indicator for instance use Ecological Footprint, which is increasingly being recognized as a measure of the ecological cost [Wackernagel et al. 2005].

2.2 Happy Planet Index

Having introduced the concept of the 'Whole Economy' in Figure 1, it seems relevant to investigate how efficiently we today are converting the exploitation of nature to human satisfaction or happiness. This has actually for a large number of countries been analyzed by what is termed the Happy Planet Index, HPI, defined as the Life Expectancy times a Life Satisfaction Index, and divided by the Ecological Footprint of the country [NEF 2009]. If we in the affluent OECD societies think of our economies as being quite efficient, the results are surprising and also embarrassing. True, citizens in these countries are as happy as in many other countries, but this is achieved at a very high cost in terms of environmental sacrifice (and in work time as well), for example ranking Denmark and USA as nos. 105 and 114, respectively, in whole economy efficiency. At the top of this we find Latin American countries, with Costa Rica and Cuba as no 1 and 7, respectively, due to their high satisfaction of basic needs, as well as their high life expectancy, combined with low ecological footprints. Some poor countries, like Zimbabwe ranks low, because of low life expectancy and low life satisfaction.

There are good human and environmental reasons for changing direction in development and lifestyles in the affluent countries. Maybe it could be useful to study some cultural experiences from other countries like the Latin Americans and Bhutan, the latter having pioneered years ago by introducing a Gross National Happiness as an indicator.

3 The role of work

Why do we work? The immediate answer has through history been that we have to produce some necessities for life. But there is more satisfaction to work than just the output. The very process of providing this output can be satisfying in itself. The two sources of satisfaction, 1) the product output and 2) the work process to provide it, can have very different value as a motive for working, as is an important issue of this paper. The two cannot be completely separated, since for instance satisfaction from the work process is low, if the output appears meaningless.

In this paper work is used to denote not only paid work, but also work in households and other more or less voluntary activities with the aim of providing goods and services.

It seems obvious, that the overall, long term need for degrowth in consumption shall require a reduction in the work input to the production sector.

3.1 Historic View on Work

The role of work in human economies has varied over history, and through different cultures. Changes have occurred due to new environmental conditions, new technological development, new cultural trends, etc. The following is a brief look at the concept of work in Western cultures, with cases from USA and Europe.

Work in Ancient Time.

Looking back 500 years or more, Northern Europe was to a large extent covered by forest, with small towns in clearings with arable land for primitive farming. The economy still had relics of the Stone Age economy based on hunters and gathers [Sahlin 1974]. Contrary to common belief, annual work time seems to have been lower than today, with scores of holidays, celebration of harvest, very short work hours in the dark winter, etc. Furthermore, when comparing today's work pattern with work in these days, (as well as when comparing with other cultures), it makes little sense to count work hours without considering the quality of the work. Most work was on farming, where cattle and pigs were fed by leaving them out in the forest eating grass, leaves, roots and various nuts and fruits. They were milked and slaughtered to provide cheese and meat for food, hides for shoes, tallow for candles, etc. Other tasks consisted in gathering nuts, berries and mushrooms in nature, fishing on the lakes, rivers and oceans, or hunting in the forest [Lidegaard 1972]. Being well home, wood had to be chopped for preparing the food over an open fire. In judging the quality of these activities, it is worth noticing that today well off people don't need to spend time on such activities, but often they do it anyway. Actually, they are even willing to pay for being allowed to engage in such activities! In the evenings our ancestors, - not only the land owners - could enjoy a meal with oysters, a steak of venison with blueberry jam and a hazelnut tart, all washed down with a mug of mead.

Of course, life at that time was not all beer and skittles. The medical care was poor, life was short, etc. But work was diversified and immediately meaningful. Real hardship came later with 1) the shrinking forest cover, which made farming hard work, 2) growing population, which reduced the per capita land, and finally 3) industrialization. The above 'paradisiacal' description should not suggest that we go back to such condition, but it could give some hints about where our economic development went off the track and made life tougher and environmentally more destructive, a dominating cause being population growth.

Protestant Work Ethics and Industrialization

Out of the ecological problems from deforestation and population growth grew a need for draining land and a general move towards more labour intensive agriculture [Kjaergaard 1994]. The so-called Protestant Work Ethics, emphasizing hard work and frugal life [Weber 2001], can be seen as an attempt in Denmark and other North European countries to use the church for imparting to the public a moral that could save the economy. Over generations and centuries these efforts succeeded, and gradually hard work was to be considered a vocation or a call, in the sense that it was good in itself, whatever the output.

Today, most people in Western societies might not feel very attached to the protestant church, or to any other religion for that matter. But the virtue of hard work is still with most of us as a deep seated call, reflected by our general admiration of hard work, whether it is needed or not. Grafting hard work as a virtue continues today, often through businesses influencing youngsters in education, sport clubs, advertisement, etc. [Beder 2000].

The above described work ethic was during the time of introduction in the 1500s and onwards, a necessity for the dominating agriculture economy, and a blessing for the emerging industrialization, which attracted the surplus population from rural areas into hard factory work in cities. During the 1800s more than 70 hours physically hard and unhealthy work per week became commonplace in the industry. For the individual, the work did not appear meaningful or satisfactory, but it was the only option for the growing surplus of farm workers, - a sheer necessity for survival as population grew.

Joining the workforce in the cities made density of workers higher here than in the scattered rural farming. The density facilitated organizing unions, and they could begin to demand better working condition, including shorter work time, which from late in the 1800s begun to decline.

3.2 Twenties Century Development

No century has witnessed so much change as did the 1900s Western world in terms of development in technology, health care and material welfare in general. Unfortunately, also with respect to wars, population growth, and environmental destruction this century was unique. Much of this was related to the attitude to work for good and bad.

Economic Depression and Work Sharing

With the industrialization, the mechanization made both the industry itself, but also agriculture, more labour productive, meaning more output per work hour, making higher hourly wages possible. This productivity and wage increase could be used to 1) increase weekly income and consumption, 2) reduce weekly hours of work, or 3) a combinations of the two. The economist Paul Douglas analyzed the worker's preferences in a number of USA industries over the period from 1890 to 1926, and found that typically they had used around 30% of the productivity gain to reduce weekly working hours [Douglas 1957]. This pressure for reducing weekly working hours continued successfully into the twenty's century.

The debate on work time reduction was in the 1900 to 1930s quite intense in the USA, and can today be an inspiration for discussing which path to choose [Cross 1993, Hunnicutt 1988, Beder 2000].

Many manufacturers supported shorter work hours, and some even introduced it voluntarily in their own factories, on the ground that the performance per hour increased with fewer hours of work. In politics the shorter hours was advocated from another surprising side, namely the right wing, on the ideological ground that more leisure would increase individual freedom, which is a basic American value.

But, obviously, the main support or pressure came from the worker's unions. The arguments were two-sided, namely 1) the benefits of getting less exhausted at work and 2) the benefit of having more time for leisure. Also the shorter working time was seen as way to push for higher wages, since it would result in less work-hours being offered on the labour market.

This support for shorter work hours in the 1920s was intensified with the depression early in 1930s, as a measure to cope with unemployment through work sharing. In 1933 the US Senate passed a bill of reducing the workweek to 30 hours, which was endorsed by the incoming president F.D. Roosevelt's administration as a work sharing policy. But earlier that same year American business leaders, cabinet officials and economists had concluded that the 30-hours week was impractical. They backed away from work sharing, and lobbied intensively, so the bill was never signed. Instead of work sharing the president turned around and went for public works programs and other work creations [Cross 1933, Beder 2000, Hunnicutt 1988]. Work week was settled at 40 hours and has never since been reduced.

The New Consumption Deal

It seems fair to name the decision in 1933 in the USA to turn from work sharing to work creation the birth of consumerism, since focus was from now on getting people not to share time and money, but to consume

more and more, and to work increasingly on production growth.

Leisure should from now on be less time intensive and more goods intensive and in general be more commercial. Some have suggested that this commercial leisure would be less satisfying and hence less desirable, as it becomes ever less active, less creative, less personal and less connected to others [Hunnicut 1988].

An important aspect of the focus at ever increasing consumption was advertisement, the central function of which is to create desires, - to bring into being wants that previously did not exist [Galbraith 1999]. The advertisement and marketing business has after WW2 itself become an important part of the economy, but first of all it became the driver to keep consumption growing at about the same rate as the productivity gain. The official political purpose of growth in consumption is to limit the unemployment due to overproduction, but behind the curtain hides a fear of a revival of the 1930s' work sharing solution to unemployment.

During the economic phase of growth after WW2, not only commercial advertisement has been booming, but easy access to cheap loans and credit helped to trap people in an eternal 'consume and work' vicious circle. Even political heads of states condescend to directly urge citizens to increase their consumption.

3.3 Recent Trends in Work Pattern

In the early 1900s the USA was, as mentioned above, pioneering in the Western World in turning productivity gain into more free time. This development came, however, to a halt in the 1930s at around 40 hours a week. After WW2, Europe caught up with this, and even took over, not so much in weekly hours, which in the 1980s settled at around 37 hours per week, but rather in annual work-time, which through several weeks paid vacations had reached a low level for industrial workers of around 1700 to 1800 hours per year, as compared to the USA average of 1900 hours and for Japan 2100 hours per year [Sanne 1995].

Despite continuous technological productivity gains and substantial increases in affluence, the decline in work time per employee in Western Europe came to an end, and was in 2000 around 1500 -1600 hours per year [Schor 2005]. In the Nordic countries, paid work hours per working-age person are essentially the same as thirty years ago, while paid working hours per family have greatly increased as a result of women entering the work force (Sanne 1995).

For politicians pursuing high GDP growth, the present situation in affluent countries can seem scaring and challenging without increase in work time. With no growth in population and nearly all women already in the labour force, growth can be obtained only from labour productivity gains, which can be hard to maintain at two per cent per year, especially in the service sector, which dominates the economies. For politicians aiming at solving global warming and other environmental problems through a policy of degrowth towards a steady-state economy, however, the outlook is much more positive, especially if the drive towards less work input can be revived. The productivity gains from improved technology, including that from energy efficiency, could then be used to slow down at work as well as during leisure time, instead of consuming ever more goods and services. Fortunately, this sustainability quest appears to fit well with trends in public preferences.

Work- Leisure Preferences

In today's Europe there seems to be discrepancies between the actual work time and people's preferences, as illustrated by the case of Denmark.

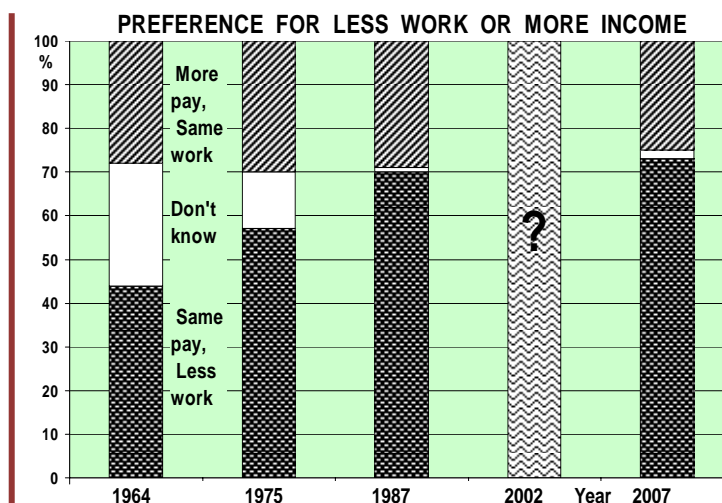
Since 1964, the National Institute of Social Research in Denmark has conducted extensive surveys of how Danes use their time, and how they would like to use it [Platz 1988; Körmendi 1990, Nørgård 2009]. One of the questions concerns peoples' preferences between more income and reduced work time. The results

are shown in **Fig. 4**. The fraction preferring less work appears to have grown over time, reaching seventy per cent in 1987.

Fig. 4 Sociological surveys over 43 years show for Denmark an increased interest in turning productivity increase into more leisure rather than more consumption.

Source:

Platz 1988, Körmendi1990, and IFKA 2007.



Similar trends towards consumption saturation are observed in other affluent countries, and particularly in the Nordic countries [Sanne 1995, 2007]. The attitudes indicated by such surveys about how people would like to use the productivity gains, should be of central interest in politics, but are seldom quoted and appear unsettling to most politicians. The right wing tends to see lower working time as a threat to their primary concern of growth in profit, production, etc. Correspondingly, the results in **Fig. 4** are usually ignored by left wing politicians and labour unions, maybe having forgotten that historically they were the ones who once successfully fought for shorter work time as the path to secure full employment.

Whatever the reason was, in their survey in 2002, see **Fig. 4**, the Danish National Institute of Social Research left out just this question. Fortunately, in 2007, another institute, [IFKA 2007], took up the question in their surveys and showed a continuation of the trend, now reaching seventy three per cent preferring less work.

Why don't people work less, if they want to? The answer is partly that few employers offer such choice and partly social pressures [Sanne 1995: 74; Galbraith 1973: 236]. The work market is not free and usually involves a choice between thirty-five to forty hours per week or zero. Also, the quest for equity and solidarity in sustainable development calls for collective agreements on work time.

The Role of the GDP Concept

If we want to know which role the GDP, emerging in the early 1930s, has played in the economic development, it is obvious to look at the development before the introduction of this quantitative measure of economic activities. Before 1930s people were interested in progress, but judged from the trends at that time in the fast developing USA economy, a dominant indicator of progress was a lowering of work time, or to put it differently, a growing free time.

It seems like this appreciation of continuous decline in work time as a dominating indicator of progress, was not broken until another quantifiable measure of progress, namely the GDP, was in place to hold on to. Economists and politicians opposing the work sharing policy, seem to have welcomed GDP as an indicator of progress, conveniently ignoring its shortcomings

Especially after WW2, economist and politicians in practice came to rely on this one indicator, GDP, as a measure of how well a nation was doing. Up to a certain level of GDP, its growth may reasonably reflect improvement in well-being of people, as it expressed satisfaction of basic physical needs for food, clothes and shelter. It is, however, striking to observe, how the political fetishism of GDP seems to have grown, the

more meaningless GDP became as a measure of well-being. This is illustrated by the fact that most attempts to come up with alternative indicators of well-being, for instance the two shown for the USA in Figures 2 and 3, have shown no progress related to the GDP growth over the recent decades. As for the switch from appreciating shorter work hours in the early 1900s to focusing on GDP, the Nobel laureate in economics, Gunnar Myrdal, in 1974 expressed, that one of the most severe shortcoming of the GDP as a welfare measure, is the total absence of any reflection on how much leisure people have [Myrdal 1974: 184].

4 Amateur Economy

4.1 The fourth way to secure employment

Efforts to secure employment in an economy with growing production capability per hour work, typically around two per cent annually, have played a major role in economic policies. The measures available can be as follows, ranked according to the role they play in politics today:

1. Increase investments, public as well as private.
2. Increase consumption, private as well as public.
3. Reduce working time to the production needed.

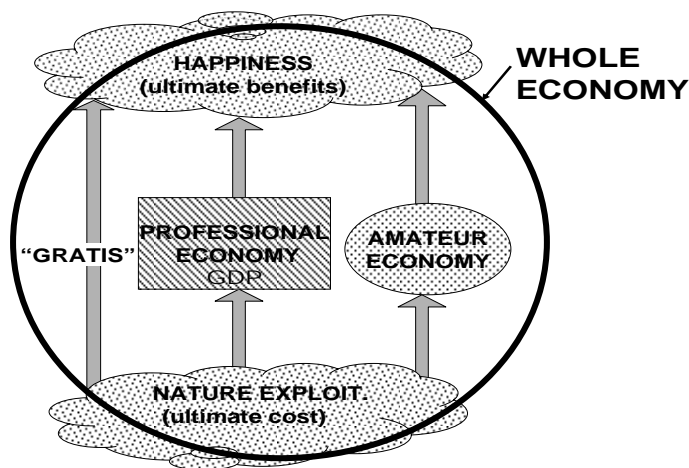
In 1945 Keynes considered the first measure, the investment policy, a kind of first aid to prevent unemployment from productivity increase, but he saw the third option, less work as the ultimate solution [Keynes 1980:384, Walker 2007].

A fourth measure can, however, be added, namely

4. Reduce work productivity.

The fourth measure, leaving some of the productivity capability per hour idle, might sound somewhat ridiculous in today's world where growth in production has top priority. But if people don't want to reduce work hours, the fourth is the only option in a degrowth economy. Reduced productivity is not completely unheard of, as for instance when governments and employees demand, - and employers provide -, better working condition and safety at the cost of some labour productivity. This way of improving the satisfaction from the work process is certainly one relevant option for coping with the growth in productivity without creating unemployment and without increasing consumption.

Fig.5 The whole economy is here split up into three parts, with the professional (money) economy in the middle, amateur economy to the right, and to the left all the free gifts from nature directly to human satisfaction.



Another version of reducing productivity of the whole economy, is, as illustrated in **Fig. 5**, to take back some of the production from the professional economy to what is here termed the Amateur Economy, where other rules prevail. The point is, that the wish for less working time, see **Fig. 4**, does not necessarily reflect a wish to spend all the extra leisure time sitting idle. Experience shows that people use part of the extra leisure engaging in some productive activities or hobbies, often in groups.

While the professional economy is driven mainly by money, amateur economy is here used to describe the part of people's activities, which are driven by love (latin: *amare* = to love) and other affections, quite similar to what is often termed voluntary or unpaid work. Contrary to common use today, the term 'amateur' is here not used as a negative term, as compared to the 'professional'. The point in making the distinction between professional and amateur economy, is that the quality of work – the satisfaction – are to be found in different parts of the flows, shown in **Fig. 5**.

Switching to more amateur economy is a way to take back control (and responsibilities) of your time and activities, since working in the professional economy is normally characterized by leaving the ultimate decisions about working procedures, working pace, and product design, to others, often anonymous stakeholders, and get compensated by money.

How to spend extra leisure time?

A common misinterpretation of the above type of surveys, **Fig. 4**, is that, if people's preferences for more leisure are fulfilled, then they will in general consume more. This is in the long run not possible. If they choose to have more leisure instead of more income, they can't have both, and their consumption (plus saving) will remain constant. The environmental impact of having more leisure depends on how the free time is spent.

The American historian Gary Cross has stressed the importance of having reduced work time turned into not just any idleness, but to a Democratic Leisure, a concept discussed in the early 1900s' struggle about work sharing [Cross 1993:3]. By this he means 'two things: a balance of work with time free from economic obligations and a form of leisure that provide the widest possible choice, access, and participation'. It is not a matter of not having any work in the professional economy at all, or that leisure can be completely un-commercial. It is a matter of finding new balances to provide optimal happiness at a sustainable level of use of nature.

Since most people in the affluent countries now spend their professional work in the service sector or other sectors with very little physical work, there might be a tendency to choose physical leisure activities like gardening, biking, craft, etc. This gives a chance for an extra benefit in the form of more physical exercise and better health.

4.2 Environmental Impact of Leisure

More leisure time will not automatically guarantee a lower environmental impact, for instance in energy consumption. But it offers unique opportunities to combine significantly reduced environmental impact with improved quality of life, if the extra leisure is spent appropriately. For example, car driving has one of the highest rates of energy consumption per hour, about 50 kWh, while in contrast, reading only consumes around one kWh [Jalas 2002]. For comparison one hour less spent at work in Denmark is estimated to save an average of roughly twenty-five kWh of energy consumption [Nørgård 2009].

Extra leisure time can be spent on slowing down, for instance in transport. Reducing car speed from 130 km per hour to 80 km, will not only save about half the energy per km, but it saves about two third of the energy use per hour. Spending some of the extra free time to replace car commuting with walking and cycling, possibly combined with public transport, can save close to all external energy for that purpose, and in the same process, improve health and well-being [Nørgård 2005].

Since the rate of energy and material throughput is the primary source of environmental impacts, 'slowing down' in general may be considered a necessary strategy to achieve sustainability through degrowth.

The lower 'labour' productivity in the amateur economy means spending longer time making a product. This will with today's economic focus at the product, be perceived as a negative aspect, but moving focus towards the production process, and the joy and satisfaction from that link, this evaluation changes.

It is striking, that all the debates in the past about reducing working hours has hardly ever had the environmental benefits on the agenda. The strong preference for more leisure illustrated in Figure 4 demonstrates a wish to have a better life, not to save the climate. If the respondents in these surveys are made aware of the collective environmental benefits, the leisure preference might be much higher. Or to put it another way, governments should encourage and support such voluntary contributions to solving global warming, etc.

4.3 Whole Efficiency of Amateur Economy

Usually the term productivity or labour efficiency is used to denote the product output per labour hour input. Sometimes is also used resource productivity, referring to output of products per input of certain natural resources. If, however, we look at the whole economy, as illustrated in Figure 1, these are too narrow definitions of efficiency. Here the ultimate output is not only the products in the form of goods or services, but also – and often dominating - the satisfaction from the process of producing the output. The ultimate cost is the sacrifices natural environment.

Let us illustrate the efficiency of the whole economy by the production of a chair. If you have craft as a hobby, you might decide to make it yourself. Doing this gives you two different satisfactions:

1. satisfaction from the work process of making the chair, spending say 30 happy hours of your leisure time.
2. satisfaction from using the product output, the chair, afterwards. (In the professional economy, the output would come from the consumption power of the salary.)

In an amateur economy, the first can often be the dominant part of satisfaction. The environmental footprint per chair might be the same as if you were making the chair in a factory, but the long happy leisure time you have chosen to spend on making it, instead of working in a factory - that is, the low labour productivity – keeps you from being very productive at a factory, making the equivalent to maybe twenty chairs during the same time. This saves resources but gives more happiness.

Another example could be if you, like thousands are doing, were spending leisure time writing voluntary update contributions to Wikipedia, the open internet encyclopedia. Such activities must be enjoyable per definition since there are no other reasons for doing it. Environmental cost is very low, much lower than the average at a workplace.

As shown in section 2.2. on the Happy Planet Index, the Western economies are ranked low in this Whole Economic efficiency, around no 100 in the world, due to large environmental impacts from the huge throughput of energy and materials. A switch towards more amateur economy will not guarantee a more efficient whole economy, but it can easily be guided towards a high efficiency.

Cinderella Economy Efficiencies

The fact that less work in the professional economy gives more individual freedom does not necessarily imply that people spend the extra free time alone engaging in each their own hobby, as illustrated by the cases above. The time will often be spend in various kind of community based social enterprises, such as 'local farmers markets, slow food cooperatives, sports clubs, libraries, community health and fitness

center, local repair and maintenance services, craft workshops, writing centers, etc.' All such community activities are forming a kind of amateur economy which Tim Jackson has termed a 'Cinderella economy', indicating that it plays an important role and yet 'sits neglected at the margin of the consumer society' [Jackson 2009].

Such community activities can be very resource efficient, providing energy saving and social satisfaction by organizing car pooling, better condition for walking and biking, food growing gardens, etc. all in the local community, eliminating much need for transport.

Often these activities can have some paid people employed, but are mainly based on voluntary work. As such they can be characterized as in between professional and amateur economies and usually contributing very little to the GDP but a lot to the whole work time, especially to keep people engaged in what they like to do. In real life, people's activities are often a mix of the professional and amateur economies.

The public should provide facilities and frames for such local community activities.

5 Concluding Remarks of Hope

Through history, scores of visions have been presented on how few hours work per week are needed in the professional money economy to provide a decent and rich life for every human being [Gorz 1983, Keynes 1931]. With the recent recognition of limits to growth on the planet we share [Meadows et al. 1972, Nørgård et al. 2010], it is time to revive work sharing to replace growth in consumption as a measure for avoiding unemployment and other miseries.

Together with a descending population in Western economies, reduction in consumption appears to be among the best political leverages for degrowth. The point is that as a compensation to people for reducing their consumption, it is possible to offer them something most of them seem to already prefer over expanding consumption, namely less work time in the professional economy.

Most people will no doubt spend the extra leisure time by voluntarily engaging more in amateur economic activities, be it in local community organizations, caring more for their children, organizing political debates, etc., all of which should be expected to satisfy people's wants better. The lower productivity – the slower pace – expected in such amateur activities is part of the environmental benefits of this model.

Studying the quests for less work from ancient time to present, it is striking that hardly any have suggested this as a necessity because of limits to the planet's capacity, but by quests for a better life. Today the quest for reducing consumption and production for environmental reasons only should be high on the agenda.

Back a hundred years ago, in the early 1900s the issue of sharing the work was high on the agenda. Today a majority of people in Western countries seems to have similar preferences, wanting to avoid unemployment by sharing the work, but they can hardly find any political party or labour union who will welcome them.

Through all the environment debate runs an often hidden agenda, namely the following four arguments for more equity in consumption and work, internationally as well as nationally: 1) Recognition of the limitation of the planet we share, will morally legitimate demand for better sharing. 2) Prevention of conflicts and social unrest when resources are scarce, calls for better distribution. 3) A consumption satiation will also be promoted by more equity. 4) Finally the satisfaction from a limited resource is optimal with equal distribution.

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